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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/081,551

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Tatsundo Aoshima

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EXAMINER

POLTORAK, PIOTR

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary  
for Applications  
Under Accelerated Examination**

Application No.

10/081,551

Applicant(s)

AOSHIMA ET AL.

Examiner

Peter Poltorak

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Since this application has been granted special status under the accelerated examination program,  
NO extensions of time under 37 CFR 1.136(a) will be permitted and a **SHORTENED STATUTORY PERIOD FOR  
REPLY IS SET TO EXPIRE:**

**ONE MONTH OR THIRTY (30) DAYS, WHICHEVER IS LONGER,**  
FROM THE MAILING DATE OF THIS COMMUNICATION -- if this is a non-final action or a *Quayle* action.  
(Examiner: For FINAL actions, please use PTOL-326.)

The objective of the accelerated examination program is to complete the examination of an application within twelve months from the filing date of the application. Any reply must be filed electronically via EFS-Web so that the papers will be expeditiously processed and considered. If the reply is not filed electronically via EFS-Web, the final disposition of the application may occur later than twelve months from the filing of the application.

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/21/06.  
2) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 3) ☒ Claim(s) 1-10 is/are pending in the application.  
3a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
4) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
5) ☒ Claim(s) 1-10 is/are rejected.  
6) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
7) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 8) ☒ The specification is objected to by the Examiner.  
9) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
10) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 11) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The Amendment, and remarks therein, received on 06/21/2006 have been entered and carefully considered.
2. The Amendment introduces a new limitation into the originally sole independent claim 1-10. The newly introduced limitation (as best understood) has required a new search and consideration of the pending claims. The new search has resulted in newly discovered prior art. New grounds of rejection based on the newly discovered prior art follow below.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

### ***Response to Amendment***

4. The applicant arguments have been carefully considered.
5. Applicant did not address all of the disclosure objections cited in the previous Office Action. The non-addressed issues are reiterated in this Office Action.
6. Applicant amended claims 1-10 in order to address lack of clarity. However, claims still comprise language that is not understood (e.g. sending the password to said commercial service system, with respect to said terminal, claim 1) and in particular claims 4 and 9 remain confusing at best. For example claim 4 recites: "when use of a commercial service system is requested from said terminal, said business system ... compares the numerical value of a result in which said one-way function was applied to the password sent from said terminal for the number of times said one-way function was applied to said password subtracted from the total number of times

said one-way function was applied to said final result, with the numerical value of said final result in said authentication information when login permission in said commercial service system is determined, and permits login if they match".

It is not clear whether it is "the numerical value" or "a result" that refers to the phrase "in which said one-way function was applied to the password". It is also not clear whether "the one-way function was applied" to the password received or sent from a terminal, whether the numerical value was sent from the terminal, etc.

For purposes of further examination the examiner exercises his best guess regarding the appropriate interpretation of the claim language and encourages applicant to recite the claim limitations using simpler language structure when clarifying/amending the claims. Applicant should pay particular attention to the current U.S. practice. For example, the method claims should comprise clearly defined method steps rather than being structured as a one long narrative limitation, similar to language of claim 4. The examiner acknowledges applicant attempts to distinguish different steps, in claim 9 for example. However, the length and confusing language suggests that several steps remain combined into a one step (e.g. "compare a result in which said one-way function was applied to the password sent from said terminal for number of times said one-way function was applied to the password subtracted from the total number of times the one-way function was applied to said final result ...")

Similarly, applicant should be consistent. For example either the articles "said" or "the" should be used through out the claim language (e.g. "the numerical value", "the password" then "said one-way function", claim 4).

Furthermore, claims 1 and 6 seem to be missing some limitations. For example, it is not clear whether it is a commercial service system, the business system or both that compare "the password with authentication information created prior to the authentication".

Lastly, although applicant attempted to amend the claim language in order to clarify the intended meaning of the claimed invention, it appears that the amendments were applied to claims individually, with no attempt to clarify the relationship between dependent claims. For example, the amended claim 6 suggests, as best understood, that "the business system" returns the password to a user's terminal and that the business system sends the password to the commercial service system. The following dependent claim 9 recites: "allowing said business system to return a password and the number of times said one-way function was applied to the password to the terminal". Besides the fact that it is not clear what is the meaning of claim 9 limitations (e.g. should the phrase: "applies said one-way function by the business system to the password to said terminal" be treated as though the password created for the terminal applies a one-way function prior to returning to the terminal, or whether after the terminal receives the password the password at the terminal is accessed by the business system, which applies a one-way function to the password?) the examiner is not able to follow the password exchange recited in

claim 9 in light of exchange observed in claim 6. In particular, it is not clear whether claim 9 suggests that after returning the password to the terminal (as recited in claim 6) a new password is "returned", this time with "the number of times said one-way function was applied to the password", whether claim 9 is intended to further limit the password exchange (return) between the business system and the terminal, or whether applicant intended limitation is a combination of both interpretations.

7. As per applicant arguments towards Birrell et al., the newly amended and understood language resulted in newly discovered prior art. Thus, applicant's arguments towards Birrell et al. are moot.

8. Claims 1-10 have been examined.

### ***Specification***

9. The disclosure is objected to because of the following informalities:

- a. The amended pg. 3 lines 2-3 recite: "used next is determined by inquiring a numerical value n that indicates how far the password was consumed".  
The phrase: "how far the password was consumed" is not understood.
- b. The phrase: "the applicable number of times n is high" on pg. 6 line 25 is not understood.

### ***Claim Rejections - 35 USC § 112***

10. Claims 1-10 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

that applicant regards as the invention. See, the relevant discussion in Response to Amendment section, above.

***Claim Rejections - 35 USC § 103***

11. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (U.S. Patent No. 6993666).

Hokkanen discloses selecting one password from a password list created prior to authentication, sending the password to said terminal, with respect to said business system that received the request for use (col. 2 lines 9-10), sending the password, with respect to said terminal (col. 2 lines 13-14), and comparing the password with authentication information created prior to the authentication; permitting login when they match (col. 2 lines 13-16), and invalidating said password (col. 2 lines 57 - col. 3 line 3, col. 3 lines 40-43, col. 5 lines 24-27), wherein the authentication information includes a plurality of different passwords so that a plurality of users of the business system need only one authentication information to use the commercial system (col. 5 lines 20-29 and Table 1). The authentication information disclosed by Hokkanen includes a plurality of different passwords so that a plurality of users of the business system need only one authentication information to use the commercial system (e.g. col. 4 line 56-col. 5 line 29).

12. Although Hokkanen's invention discloses passwords generation and validation by the same entity, and fails to discuss the variation wherein the password generated

and received from one system (a business system) is used by another system (logon into a commercial system), such a variation if not inherent, is at least obvious. Using only one entity to communicate with a plurality of clients is impractical because it limits the scalability of the overall system. In fact in the discussion of prior art Hokkanen explicitly acknowledges the well-known and implemented extension of an authentication system that utilizes plurality of elements (e.g. an additional party authorized by the service provider) helping with passwords distribution. Thus, if not inherent, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention not to limit Hokkanen's invention to only the commercial service system distributing generated passwords to users (that use the passwords to access and use the commercial service system) given the benefit of ensuring system's scalability.

13. As per business system and commercial service system sending/receiving list of passwords, the synchronization of passwords between two systems is implicit. Not providing the authentication information by the first system (e.g. the business system) to another system (e.g. the commercial system) would defeat the purpose of the expended system functionality, since the password valid at one system would not be valid at the second system.

14. Although it is clear that the authentication information in Hokkanen's invention includes a plurality of different passwords that are subjects to invalidation, Hokkanen does not explicitly disclose teach that the purpose of the plurality of different password is to meet needs of a plurality of users of the business system to only one



authentication information to use the commercial system. However, this limitation is nonfunctional descriptive limitation and do not alter a user authentication. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

15. Claims 2-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (U.S. Patent No. 6993666) in view of Lamport ("Password Authentication with Insecure Communication, Communications of the ACM, vol. 24 Number 11, Nov. 1981).

Hokkanen discloses the login authentication method as discussed above.

16. As per claim 2-3, 7-8 Hokkanen does not disclose using a random number in password generation.

However, practice to using random numbers in passwords generation is old and well-known, as illustrated by Lamport (e.g. "Implementation", pg. 771). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a random number in a password generation given the benefit of increased security.

Lamport discloses the limitations of claims 4-5 and 9-10 on pg. 770-771 (pg. 771 in particular).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bosen (U.S. Patent No. 5060263),  
Rahman (U.S. Pub. No. 20020144128).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques can be reached on (571) 272-6962. The fax phone

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number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
9/11/06

  
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